

Wind turbine on the Rosebud Sioux Reservation in South Dakota. EPA Region 8 is finding new ways to encourage the development of clean and renewable energy resources. EPA's participation in a multi-agency environmental justice pilot led to the dedication of this 750-kW unit in 2003. EPA and federal partners provided support to the Rosebud Sioux and the Intertribal Council on Utility Policy (ICOUP), a confederation of Northern Great Plains tribes, to harness wind energy for tribal economic development. Today, the turbine produces enough electricity to serve about 300 to 350 homes, more than two million kilowatt-hours per year. The Tribe is anticipating the sale of excess energy that it generates for local use, with a multi-year sale of "green power" to Ellsworth Air Force Base, near Rapid City.



What is EPA Region 8?

The Environmental Protection Agency's Region 8 office works to protect human health and the environment in Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 sovereign tribal nations. We share this mission with many partners — state, local and tribal governments, businesses, nongovernmental organizations, communities and individuals.

EPA Region 8 is unique. Our states encompass the heart of the West, including much of the Rocky Mountains, Great Plains and Colorado Plateau. More than two-thirds of our roughly 10 million people live in two distinct bands of urban development, Colorado's Front Range and Utah's Wasatch Front. These areas, along with a few isolated cities and towns, are experiencing rapid population growth.

Paradoxically, Region 8 is home to some of the most rural counties in the nation. Characterized by vast open spaces — mountains, plains, canyons and deserts — and small, concentrated population centers, these areas still maintain some of the wild and frontier character that many associate with the West. They also contain many of our nation's most recognizable landscapes, including Yellowstone, Glacier, Rocky Mountain, Badlands, Zion and dozens more National Parks and



Monuments, millions of acres of forests, and still more range, farm and grassland.

Water defines our region. Much of Region 8 is arid, placing a premium on the availability and quality of water resources to meet competing demands from farmers, municipalities, recreationists as well as fish and wildlife. Many rivers originate in the Rocky Mountain States; their waters are vital sources of life for people, plants and animals.

Land ownership patterns influence EPA's work in Region 8. Public lands — including those managed by the U.S. Forest Service, the Bureau of Land Management, and the National Park Service — comprise more than one-third of the land area, making EPA's success dependent on our ability to work with other federal agencies. Tribal nations, which collectively cover an area the size of Tennessee, are also prominent. EPA Region 8 works closely with each of these 27 sovereign nations to protect human health and the environment.

Region 8 is also defined by an abundance of natural resources, from rich natural gas and coal deposits to vast expanses of wilderness rich in ecological diversity. These resources support thriving economies in our states, tribes and local communities, and are a vital part of our regional identity.

EPA's statutes and our work with states and tribes

Since 1970, EPA has been charged with implementing and enforcing significant laws and regulations that are the foundation of programs that protect our air, water, land, food and ecosystems. EPA delegates the responsibility for many environmental laws to states and tribes. In these situations, EPA's role is focused on technical assistance and

oversight. However, Congress has specified that some laws, like Superfund, can only be implemented by EPA.

Region 8 successes

Since 1970, EPA and its partners have achieved remarkable successes. Nationally, our air is cleaner, our water is purer, our drinking water and food are safer, and our land is cleaner than when we started. Here in Region 8, we have achieved similarly impressive results.

Air is cleaner. Region-wide data indicate that carbon monoxide concentrations at monitoring locations have been cut by more than 70 percent (1982-2001), lead by more than 90 percent (1982-2001), sulfur dioxide by 70 percent (1982-2001), particulate matter by more than 10 percent (1992-2001) and ozone by 10 percent (1983-2002). The region's biggest urban areas, Denver and Salt Lake City, have made dramatic air quality strides due to controls on automobiles and industry. And success is not just limited to urban areas.

The air is also cleaner in many small cities like Great Falls, Montana, where carbon monoxide concentrations have been cut by 50 percent since 1987.

Water is purer. Since 1972, permit programs that limit pollution have improved water quality in rivers and lakes across the region, leading to water that is safer for swimming, fishing and drinking. More than 2,000 pollution sources are covered under these programs, preventing millions of pounds of pollutants from entering Region 8's waters each year. Other programs to protect ground and surface waters have led to cleanups at over 14,000 leaking underground storage tanks, helped communities revitalize rivers and streams in hundreds of watersheds and eliminated risks to local water resources at thousands of hazardous waste sites. In addition, drinking water rules and regulations — and EPA's technical and financial support to help water systems meet them — have assured that more than 95 percent of the region's population consistently receives water that meets all health-based standards.

Land is better protected. EPA's Superfund program has successfully cleaned up or is in the process of cleaning up more than 60 sites with serious hazardous waste contamination in Region 8. Many of these areas have been returned to productive use. Region 8's hazardous waste program regulates hundreds of facilities that use or produce dangerous substances and uses a cradle-to-grave waste management system

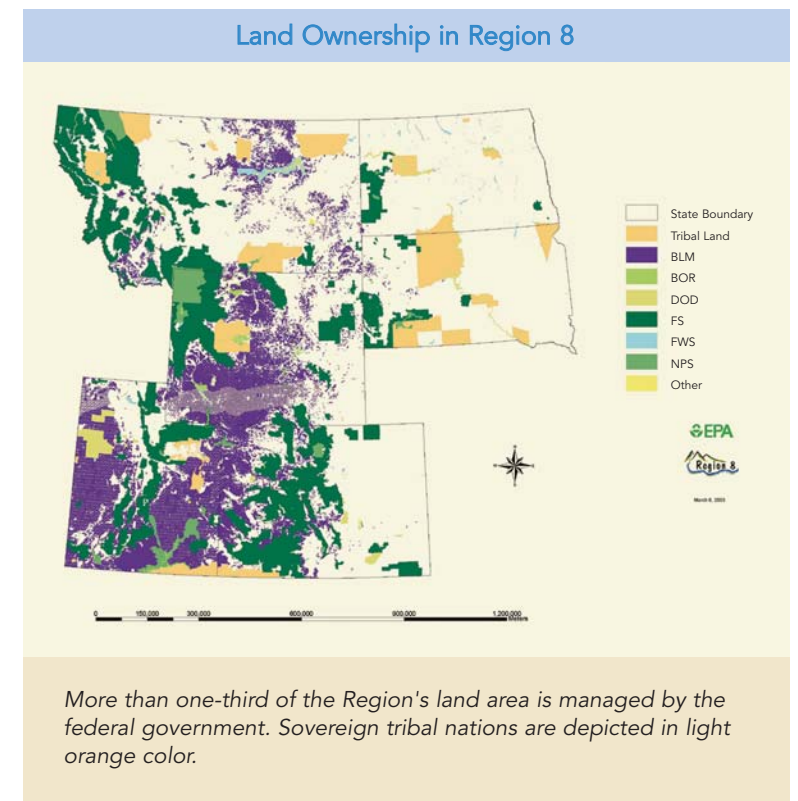




Photo: USDA-NRCS

Farmland in North Dakota. Windbreaks reduce erosion, absorb runoff and prevent sediments and nutrients from polluting surface and groundwater.

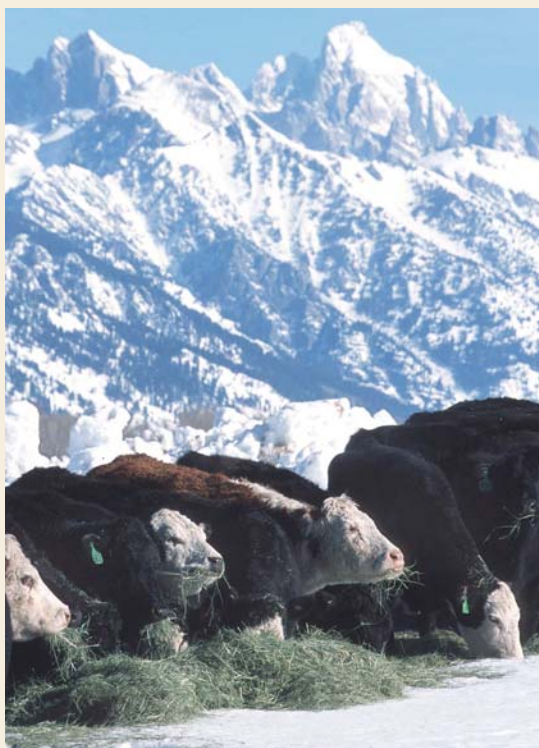


Photo: USDA-NRCS

Cattle ranching in Wyoming. Nearly half of Region 8's land area is used for raising livestock.

that oversees their proper reuse or disposal. The Region's National Environmental Policy Act program has reviewed thousands of projects on federal lands to make sure that the development and use of forests, grasslands and other sensitive natural areas minimizes environmental impacts. And these are just a few examples.

Despite these successes, EPA's work continues. As environmental issues change in nature and context, so must we. Persistent and emerging challenges require the strength of existing laws as well as innovative approaches. For example, some of our urban areas are again experiencing problems with ozone pollution. The clear vistas we enjoy at our parks and monuments are threatened by new sources of air pollution. Runoff from mines, farms and pastures remains a stubborn source of water pollution. New health-based drinking water standards are proving difficult to reach and costly to implement. Responsibilities associated with Homeland Security have added workloads to environmental programs. Today, more than ever, meeting these challenges depends on effective partnerships with states and tribes.

EPA Region 8 priorities

Agriculture

In terms of geography, agriculture represents the largest land use and the most widespread set of potential impacts on the environment in Region 8. There are nearly 145,000 farms and ranches in Region 8. These account for nearly one-fourth of the total farm and ranch area in the nation, and more than half of the region's land area, including 240 million acres of public and private grazing land. Because of this, EPA's ability to help and encourage ranchers and

farmers to practice environmental stewardship is critical.

Agriculture, and the industries it supports, is also one of the most important economic sectors in our states and tribes. These activities generate more than \$16 billion annually in Region 8, with beef cattle, sheep, lambs, hogs, wheat, hay, soybeans, corn, dry beans, barley, sunflowers and canola as leading commodities.

Many environmental challenges are associated with agriculture. For example, rivers and streams can be polluted with sediments and nutrients that run off fields and pastures. In some areas, pesticides have leached through soils and into groundwater. The trend toward large-scale farming, particularly animal feedlots, presents challenges associated with the management of large volumes of animal waste.

EPA Region 8's Agriculture Strategy includes developing partnerships with producers as well as federal, state and local agencies to support agricultural economies while improving environmental performance. Our objectives include protecting rivers, lakes, and groundwater from pollution, ensuring drinking water quality, encouraging the safe use and management of pesticides, and generally maintaining the adequacy of programs that address agricultural impacts. This includes work with partners to implement Concentrated Animal Feeding Operations (CAFO) rules that protect water quality, promote pollution prevention on farms and within agribusiness, encourage stewardship and conservation practices for agricultural lands, and assess the potential impacts of biotechnology and transmissible diseases.

Energy

Region 8's states and tribal nations contain vast fossil fuel and renewable energy resources — so vast that the region is in many ways the center of the nation's energy future. Our region produces nearly half of the nation's coal and large amounts of gas and oil, and contains significant reserves of these conventional fossil fuels as well as less conventional resources such as coalbed methane. Region 8 also enjoys significant renewable resources, including wind, solar, geothermal and biomass.

With the current emphasis on resource extraction and electricity production to meet growing demand and foster national security, energy projects in Region 8 are increasing. More mines and wells are being dug, more power plants are being built, and more pipelines and transmission lines are being laid.

Region 8's programs protect air, water, land and ecosystems from the potential impacts of energy development and production. Specific objectives include making sure that air quality and visibility are not degraded by power plant emissions; surface water, drinking water sources and ground water are protected from polluted runoff and wastes; and ecosystems and wetlands are preserved as roads and transmission lines are built.

Strengthening partnerships is critical in addressing energy issues. Region 8 is engaged with federal agencies, states, tribes and non-governmental organizations to protect the environment and increase efficiencies in the review and permitting of energy activities. Success in this area will expedite and ensure environmentally protective development.

Promoting energy efficiency and supporting renewable energy resources are

also parts of our energy priority. Many areas in Region 8 are beginning to tap vast wind-energy potential through the construction of wind turbines and transmission lines. Since 2001, the amount of wind energy generated in our region has tripled and now represents more than 10 percent of the nation's total wind generation. EPA Region 8 is encouraging these projects by incorporating them into enforcement settlements and by sharing information and technical assistance with partners. In addition, programs such as ENERGY STAR® promote energy efficiency in homes, businesses and public places. This work achieves substantial energy and cost savings as well as pollution reductions. Through greater efficiency and the development of cleaner sources, we can help meet growing needs and protect the environment.

Homeland Security

EPA has been called upon to play a strategic role in Homeland Security efforts to improve preparedness and the ability to respond to terrorist attacks. The president has delegated to EPA the responsibility for safeguarding the nation's drinking water supplies and delivery systems and for responding to biological, chemical and hazardous waste risks posed by potential terrorist attacks.

One of EPA's most important roles is responding to emergencies. Over the past years, EPA provided time-critical responses to the attacks on the World Trade Center and the anthrax contamination on Capitol Hill. In the event of future attacks or disasters, Region 8 is ready to provide technical expertise, emergency response and further protection for any threats to health and environment. EPA Region 8 possesses unique capabilities to collect, synthesize, interpret and communicate complex information about possible contaminants and the condition of the environment. These include highly skilled on-scene coordinators, extensive links to state and local responders, and sophisticated laboratory analysis and monitoring skills. Region 8 has also established a Regional Operations Center for emergency communications and coordination.



Coalbed methane rig. CBM has emerged as a significant energy resource in Region 8. Much of the nation's CBM currently comes from Wyoming and Montana's Powder River Basin, where more than 10,000 wells have come online since 2000. Today, more than 13,000 are in operation with many more expected. EPA is working with partners to make sure CBM development occurs in a manner that protects wildlife and air and water quality.



Salt Lake City's Gateway District, before and after revitalization. EPA invested heavily in the assessment and cleanup of the area with state and local partners. Today, the thriving district contributes more than \$275 million in annual property tax revenues alone and supports thousands jobs.



Prevention, including safeguarding vulnerable infrastructure and materials, is an important part of our Homeland Security mandate. Region 8 has taken steps to promote security awareness for industrial and municipal facilities, as well as businesses and communities. We will continue to work with partners to improve our ability to prevent, prepare for and respond to any types of incidents that threaten human health and the environment.

Region 8 is also focused on strengthening the communications network we have established with federal, state and local response authorities, enhancing expertise and readiness through training and coordinated exercises, and taking additional steps to secure infrastructure and hazardous materials. In the long term, our efforts will minimize the likelihood of terrorist incidents and assure our ability to provide time-critical and coordinated responses to any incidents that do occur.

Revitalization

Revitalization is a term EPA uses to describe efforts to bring once-polluted areas back into productive use. While EPA has traditionally cleaned up pollution, it is only in the past decade that our programs have begun to focus on reusing the places that we clean up as parks, golf courses, open space, natural areas, parking lots, residential areas, commercial space or mixed-use developments. Most of this activity has been through our Superfund program, which is focused on high-risk sites and costly cleanups, and our Brownfields program, which provides resources to assess, clean up and revive areas where uncertainty about contamination impedes redevelopment.

Here in Region 8, EPA revitalization successes include forging a world-class golf course out of an area once contaminated by

heavy metals from past copper smelting activities in Anaconda, Montana, and transforming a site with low-level radioactive soils in Denver into a thriving Home Depot. In Salt Lake City, EPA's work to help assess and clean up properties helped transform the once dilapidated Gateway District into a thriving commercial and residential area. Region 8 successes also include working with local stakeholders to restore watersheds.

The goal of EPA's revitalization agenda is to extend the reuse concept into relevant programs so that communities can safely return land and water resources to productive use. Region 8 is making planning for the reuse of sites a part of the Resource Conservation and Recovery Act, Underground Storage Tank, Federal Facilities, Base Realignment and Closure and Ecosystems Protection programs. Through this approach, sites will be assessed comprehensively, and if necessary, cleaned up or restored. This integration leverages resources from multiple programs and provides certainty and comfort to local governments, communities and businesses about properties and their readiness for reuse.

EPA is beginning to use this revitalization approach in places like the San Juan Mountains in Southwest Colorado. Our work in the region will provide a menu of flexible tools, funding sources, technical expertise and regulatory options that focus on reviving local communities and the watersheds they depend on. Region 8's revitalization agenda is also working in Denver, bringing programs together to collect data to determine the readiness of properties for reuse across the city. In Indian Country, revitalization work is helping identify and clean up waste sites so they can be reused and contribute to the economic and social health of tribal communities.

Supporting State and Tribal Programs

States

States are vital partners in achieving EPA's mission. A large percentage of EPA's programs are delegated to Region 8 states, which also carry out other environmental work through cooperative agreements, contracts and other arrangements. In 2004, EPA provided more than \$166 million to environmental health, protection and agriculture agencies in Region 8 states, including \$100 million for clean water and drinking water revolving loan funds.

To maintain and improve the effectiveness of the programs that we delegate to states, EPA continues to build strong, collaborative relationships with state agencies that leverage respective authorities and responsibilities. EPA plays an oversight role in these situations, and focuses on providing states with adequate resources and technical support.

Another focus area in our partnership with states is improving the ability to focus limited resources on priorities. In Region 8, EPA and states are collaborating on a "priority-driven resource allocation" process that makes sure that resources are deployed to the most critical environmental problems.

Tribes

Indian Country is a big part of Region 8 — our land area includes 27 sovereign tribal nations, which collectively cover an area the size of Tennessee. EPA has a special trust responsibility to provide environmental protection on these lands.

Environmental challenges on tribal lands are significant. Most tribes lack the resources and expertise to carry out full-fledged environmental programs, and many face basic issues such as inadequate waste disposal options and poor drinking water systems.

EPA Region 8's strategy is to implement programs on tribal lands while concurrently helping tribes develop the skills and capacity to manage their own programs. EPA devotes considerable staff and resources to make sure that clean drinking water is available on tribal lands, for example. EPA also conducted more than 400 inspections on Region 8 tribal lands in 2004 and provided tribes with more than \$11 million in grants for water quality standards and monitoring, wetlands protection, air quality planning and monitoring and pesticides management activities.

EPA is making strides in helping tribes develop their own programs. As of 2004, Region 8 tribes have been awarded "treatment in the same manner as a state" (TAS) status for a collective total of 67 programs. This status enables tribes to receive funding for specific program activities in cooperation with EPA. TAS represents the most basic step towards full program delegation and allows tribes to hire contractors and address important environmental issues on their own. Under TAS, tribes have been given authority to implement limited programs for setting water quality standards, monitoring programs and nonpoint source water pollution grants.

EPA's ultimate goal is to help tribes attain full delegation of programs. Two reservations in Montana, the Flathead, home to the Confederated Salish and Kootenai tribes, and Fort Peck, home to the Sioux and Assiniboine, are fully delegated EPA's Water Quality Standards program. Region 8 expects more tribes to achieve full delegation of additional programs in upcoming years.

Direct Implementation

EPA Region 8 has a large workload devoted to directly implementing programs on tribal lands, in states that have not accepted delegation for certain programs, and for programs that legislation does not allow us to delegate.

Despite the progress noted in the sections above, Region 8 is charged with implementing the vast majority of environmental programs on tribal lands and many programs or portions of programs in states. These include the Public Water System program in Wyoming as well as Superfund, Radon, Toxic Release Inventory and additional programs that legislation does not allow us to delegate to states.

Meeting these responsibilities is critical to the protection of human health and the environment in Region 8. This challenge will continue to demand our attention and a large share of our resources, especially as increased activities in sectors such as energy and agriculture add workloads to programs. Region 8 also has a responsibility to make sure that our programs protect sensitive and at-risk populations, including children, the aged, low-income families and other groups that may be disproportionately affected by environmental impacts.



Photo: Dawn Charging - ND Tourism